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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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LEE, HONG, DEGERMAN, KANG & SCHMADEKA, P.C.
801 SOUTH FIQUEROA STREET
14TH FLOOR
LOS ANGELES, CA 90017

EXAMINER

BELL, MELTIN

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,362

Applicant(s)

DAN ET AL.

Examiner

Meltin Bell

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to application **09/931,362** filed 08/16/2001.

Claims 1-18 have been examined.

Priority

Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Acknowledgment is made of applicant's claim for foreign priority based on an application #2000-47829 filed in Korea on **August 18, 2000**.

Drawings

The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the drawings.

The drawings are objected to because:

- 'TYP EDUCATION CENTER' in Fig. 2 would read well as 'ROBOT EDUCATION CENTER' suggested on page 5, line 24.
- 'VOICE AND MOTION' in Fig. 2 would read well as 'VOICE, MOTION AND GESTURES' suggested on page 7, line 24.
- Fig. 4 does not show the information input means of page 7, lines 5-7.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. **Applicant's cooperation is requested and required in correcting any errors of which applicant may become aware in the specification.**

The disclosure is objected to because of the following informalities:

- The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: Toy Learning in a Cyber Community Apparata and Methods
- 'in offline' would read well as 'offline' on page 1, line 10, page 2, line 8, page 5, line 8, page 6, lines 8, 10, 13-14, 22, page 7, lines 2, 23
- 'according to actions as' on page 1, line 19 would read well as 'from inputs such as'
- 'chances can not ... not be induced' on page 1, line 25 would read well as 'opportunities are not provided and differing interests are not imported'
- 'in online' on page 2, line 15, page 3, lines 14-15, page 4, line 5, page 5, lines 9, 13-14, page 9, lines 4, 7, 19 would read well as 'online'

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- 'data exchange information ... character and the' on page 3, lines 16-17 would read well as 'cyber character exchange data with a'
- 'audio information after buying the toy' on page 4, line 24 would read well as 'a microphone'
- 'house' on page 5, line 22 would read well as 'home'
- 'apparatuses' would read well as 'apparata' on page 8, lines 12, 15, 20, 22

Appropriate correction is required.

Claim Objections

Claims 1, 4-6, 8-9, 11-13 and 18 are objected to because of the following informalities:

Regarding claim 1:

- 'by learning in online' would read well as 'from online learning'
- 'experience of the cyber character or experience of a user's learning' would read well as 'a cyber character's experience or a user's learning experience'

Regarding claim 4:

- 'an operation' would read well as 'operational'
- 'for providing an upgrade program provided' would read well as 'provides an upgrade program received'

Regarding claim 5:

- 'program of the cyber character' would read well as 'a cyber character program'

Regarding claim 6:

- 'to contact with the cyber character of another' would read well as 'for contacting cyber characters of other users'

Regarding claim 8:

- 'apparatuses' would read well as 'apparata'

Regarding claim 9:

- 'motion of a level ... an audio information' would read well as 'motion, learning or outputs audio information corresponding to the experience level of the cyber character in the cyber community'

Regarding claim 11:

- 'has a memory ... with another toys' would read well as 'has memory for memorizing learned information and an input/output unit for exchanging information with other toys'

Regarding claim 12:

- 'a memory of another user' would read well as 'another user's memory'

Regarding claim 13:

- 'The toy learning method' would read well as 'A learning method implemented in a computerized toy'

Regarding claim 18:

- 'The toy' would read well as 'A method implemented in a computerized toy'

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Office presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Office to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1-4, 7, 9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* USPN 5,977,951 "System and method for substituting an animated character when a remote control physical character is unavailable" (November 2, 1999) in view of *Gagin et al* USPN 5,630,757 "Real-time multi-user game communication system using existing cable television infrastructure" (May 20, 1997) in view of *Yamaguchi et al* USPN 6,314,412 "Evolutionary control of machine based on user's preference inferred from user's operation" (Patented November 6, 2001; Filed September 24, 1998) in view of *Kephart et al* USPAPN 2001/0042087 "AN

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AUTOMATED ASSISTANT FOR ORGANIZING ELECTRONIC DOCUMENTS" (Filed April 17, 1998) and in further view of *Freeman et al* US 6,301,462 "Online collaborative apprenticeship" (Patented October 9, 2001; Filed June 25, 1999).

Regarding claim 1:

Danieli et al teaches,

- a cyber character (Abstract, "An educational computer ... program will continue") for learning (column 1, lines 48-53, "the programmed dialog ... will be unavailable") online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")
- a toy (Fig. 1)

However, *Danieli et al* doesn't explicitly teach a cyber community having a cyber character which grows by learning in online or a toy which grows by receiving experience of the cyber character or experience of a user's learning while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")
- receiving experience of a user's learning (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

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- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")

- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")

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- Accomplishing the learning goal in a way most productive to the learner
(*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al* and *Freeman et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones and accomplishing the learning goal in a way most productive to the learner.

Regarding claim 2:

The rejection of claim 2 is similar to that for claim 1 as recited above since the stated limitations of the claim are met by the references. Claim 2's limitations difference is taught in *Gagin et al*:

- the cyber community is performed in a network server (Abstract, "A complete multi-user game ... game playing equipment") which provides cyber character information of a user and cyber character information of another user (column 6, lines 13-24, "The database server ... the cyber community")

Regarding claim 3:

The rejection of claim 3 is similar to that for claim 1 as recited above since the stated limitations of the claim are met by the references. Claim 3's limitations difference is taught in *Danieli et al*:

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- the cyber community is performed in a performance apparatus for outputting the information of the cyber character. (column 2, lines 12-27, "The present invention ... from the user")

Regarding claim 4:

The rejection of claim 4 is similar to that for claim 1 as recited above since the stated limitations of the claim are met by the references. Claim 4's limitations difference is taught in *Gagin et al*:

- the cyber community is performed in a network server for supplying an operation data for the toy and a performance apparatus for providing an upgrade program provided from the network server (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Regarding claim 7:

The rejection of claim 7 is the same as for claim 1 as recited above since the stated limitations of the claim are set forth in the references.

Regarding claim 9:

The rejection of claim 9 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 9's limitations difference is taught in *Danieli et al*:

- the toy exhibits motion of a level corresponding to experience of the cyber character in the cyber community and learning by the user or outputting an audio information (column 12, lines 3-9, "the program content ... words, phrases, movements")

Regarding claim 11:

The rejection of claim 11 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 11's limitations difference is taught in *Danieli et al*:

- the toy has a memory for memorize the information by learning and an input/output unit for exchanging information with another toys (Fig. 2; column 6, lines 66-67, "The exemplary system ... a conventional personal com-"; column 7, lines 1-7, "puter 20, including a processing ... information between elements")

Regarding claim 12:

The rejection of claim 12 is similar to that for claim 11 as recited above since the stated limitations of the claim are set forth in the references. Claim 12's limitations difference is taught in *Danieli et al*:

- the memory of the toy is detachable and can be replaced by a memory of another user (column 7, lines 8-13, "The personal computer ... other optical medium")

Regarding claim 13:

Danieli et al teaches,

- having the toy (Fig. 1) study by controlling a certain part of the toy or a remote controller (Abstract, "An education computer ... program will continue") or using an information input means such as an audio information (column 7, lines 30-35, "A user may ... camera, or the like") and then storing information in the memory (column 7, lines 8-13, "The personal computer ... other optical medium")

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- reflecting information of the toy on the activity of the cyber character (Abstract, "An educational computer ... program will continue") by transmitting (column 1, lines 39-42, "The physical character ... the physical character") the information to the server (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2");

However, *Danieli et al* doesn't explicitly teach having the toy study by controlling a certain part of the toy or a remote controller or using an information input means such as an audio information and then storing the experience information in the memory, reflecting the experience information of the toy on the activity of the cyber character in the cyber community according to the experience information of the toy by transmitting the experience information to the network server, having the toy learn by transmitting the experience information according to the activity of the cyber character in the cyber community or upgrading the operating/application program corresponding to the extent of learning of the toy while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community") performed in a network server (Abstract, "A complete multi-user game ... game playing equipment")

- upgrading the operating/application program (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")

- experience information (column 8, lines 53-65, "After completion of ... feeling of comfort")

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Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")

- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")

- Accomplishing the learning goal in a way most productive to the learner
(*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al* and *Freeman et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones and accomplishing the learning goal in a way most productive to the learner.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of *Freeman et al* in view of *Baer* USPN 4,846,693 "Video based instructional and entertainment system using animated figure" (July 11, 1989) in view of *Berman* USPN 4,373,918 "Audio-visual, child-participating educational entertainment center" (February 15, 1983) in view of *Murphy* USPN 6,564,380 "System and method for sending live video on the internet" (Patented May 13, 2003; Filed January 24, 2000) and in further view of *Sterling* USPN 6,466,975 "Systems and methods for virtual population mutual relationship management using electronic computer driven networks" (Patented October 15, 2002; Filed January 4, 2000).

Regarding claim 5:

Danieli et al teaches,

- a cyber character (Abstract, "An educational computer ... program will continue") for learning (column 1, lines 48-53, "the programmed dialog ... will be unavailable") online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")
- a toy (Fig. 1)
- a character acts as a guide (column 1, lines 31-44, "The product includes ... from the child")

However, *Danieli et al* doesn't explicitly teach a cyber community having a cyber character which grows by learning in online, a toy which grows by receiving experience of the cyber character or experience of a user's learning, a home (family) for rearing a cyber character, a school in which the cyber character learns audio information such as music and voice, motion and gesture or a robot education center for upgrading program of the cyber character or downloading operation data and an information center for providing data such as a shopping mall, news and weather while the cyber character acts as a shopping guide while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")
- an upgrading program of the cyber character (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")

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- receiving experience of a user's learning (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")
- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Baer teaches,

- a school (column 3, lines 45-53, "The animated FIG. 15 can ... a verbal response") in which the cyber character learns audio information such as music (column 9, lines 38-51, "Assume that the ... to be generated") and voice, motion and gesture (column 11, lines 16-34, "It is to ... the student's responses")
- a robot (Figs. 1-2, 5-9; column 1, lines 30-34, "The focusing of ... in the marketplace")

Berman teaches,

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- an education center (column 6, lines 11-28, "The scene will ... on the screen") for the home (family) (column 7, lines 40-62, "it is possible ... in his home") rearing a child

Murphy teaches,

- an information center for providing data (Abstract, "An Internet-based ... live events programming, etc.") such as news and weather (Figs. 1, 6; column 5, lines 14-26, "the master authorization ... the Master site")

Sterling teaches,

- providing data such as a shopping mall (column 24, lines 45-51, "When Beatrice goes ... the Visitor Tool")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")

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- Influencing robot actions and spoken words (*Baer*, Abstract, "An animated figure ... figurations are presented"; column 1, lines 30-34, "The focusing of ... in the marketplace")
- Regulating the pace of education (*Berman*, column 1, lines 41-45, "It is another ... story being presented")
- Transmitting high interest news to the world (*Murphy*, column 6, lines 64-67, "a global video ... located in major"; column 7, lines 1-16, "cities of the ... data transmission networks")
- Altering dynamically a visitor's virtual experience (*Sterling*, Abstract, "A method and ... this personal experience")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al*, *Baer*, *Berman*, *Murphy* and *Sterling* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner, influencing robot actions/spoken words, regulating the pace of education, transmitting high interest news to the world and altering dynamically a visitor's virtual experience .

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of

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Freeman et al in view of *Anderson et al* "A continuous media I/O server and its synchronization mechanism" (October 1991).

Regarding claim 6:

Danieli et al teaches,

- a cyber character (Abstract, "An educational computer ... program will continue") for learning (column 1, lines 48-53, "the programmed dialog ... will be unavailable") online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")
- a toy (Fig. 1)

However, *Danieli et al* doesn't explicitly teach a cyber community having a cyber character which grows by learning in online, a toy which grows by receiving experience of the cyber character or experience of a user's learning or the network server is characterized that programs for synchronizing the cyber community are provided to respective users to contact with the cyber character of another users while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")
- the cyber community is performed in a network server (Abstract, "A complete multi-user game ... game playing equipment") which provides cyber character information of a user and cyber character information of another user (column 6, lines 13-24, "The database server ... the cyber community")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")

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- receiving experience of a user's learning (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")
- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Anderson et al teaches,

- the network server is characterized that programs for synchronizing (page 51, left column, "Acme is a network server ... logical time system") the cyber community are provided to respective users to contact with the cyber character of another users

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

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- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")
- Handling several continuous media data streams concurrently (*Anderson et al*, page 53, Figure 2, "An Acme server ... to a connection")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al* and *Anderson et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner and handling several continuous media data streams concurrently.

Claims 8 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of *Wu* US 6275575 "Method and system for coordinating and initiating cross-platform telephone conferences" (Patented August 14, 2001; Filed January 12, 2000).

Regarding claim 8:

Danieli et al teaches,

- a cyber character (Abstract, "An educational computer ... program will continue") for learning (column 1, lines 48-53, "the programmed dialog ... will be unavailable") online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")
- a toy (Fig. 1)

However, *Danieli et al* doesn't explicitly teach a cyber community having a cyber character which grows by learning in online, a toy which grows by receiving experience of the cyber character or experience of a user's learning or the performance apparatuses are a computer, mobile phone and PDA, which have wire and wireless communication functions while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")
- receiving experience of a user's learning (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

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- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")

- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Wu teaches,

- the performance apparatuses are a computer, mobile phone and PDA (column 2, lines 54-67, "a coordinating server ... included in the"; column 3, lines 1-12, "telephone conference and ... coordinator's terminal device"), which have wire and wireless communication functions

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")

- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")
- Generating and storing a server control script (*Wu*, column 3, lines 14-17, "the coordinating server ... coordinator identification information")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al* and *Wu* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner and generating and storing a server control script.

Regarding claim 14:

Danieli et al teaches,

- having the toy (Fig. 1) study by controlling a certain part of the toy or a remote controller (Abstract, "An education computer ... program will continue") or using an information input means such as an audio information (column 7, lines 30-35, "A user

may ... camera, or the like”) and then storing information in the memory (column 7, lines 8-13, “The personal computer ... other optical medium”)

- reflecting information of the toy on the activity of the cyber character (Abstract, “An educational computer ... program will continue”) by transmitting (column 1, lines 39-42, “The physical character ... the physical character”) the information to the server (column 7, lines 46-53, “The personal computer ... been illustrated in FIG. 2”);

However, *Danieli et al* doesn't explicitly teach having the toy study by controlling a certain part of the toy or a remote controller or using an information input means such as an audio information and then storing the experience information in the memory, reflecting the experience information of the toy on the activity of the cyber character in the cyber community according to the experience information of the toy by transmitting the experience information to the network server, having the toy learn by transmitting the experience information according to the activity of the cyber character in the cyber community, upgrading the operating/application program corresponding to the extent of learning of the toy or the performance apparatus is used to operate the cyber community by downloading the program for operating the cyber community and the data information from the network server to reduce the amount of data which is transmitted between the network server and the performance unit while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, “The database server ... the cyber community”) performed in a network server (Abstract, “A complete multi-user game ... game playing equipment”)

- upgrading the operating/application program (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")
- experience information (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")
- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Wu teaches,

- the performance apparatus is used to operate the cyber community by downloading the program (column 1, lines 12-17, "the invention relates ... from network-based software applications") for operating the cyber community and the data information from

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the network server to reduce the amount of data which is transmitted between the network server and the performance unit

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")
- Generating and storing a server control script (*Wu*, column 3, lines 14-17, "the coordinating server ... coordinator identification information")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al* and *Wu* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn

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from more established ones, accomplishing the learning goal in a way most productive to the learner and generating and storing a server control script.

Regarding claim 15:

The rejection of claim 15 is similar to that for claim 14 as recited above since the stated limitations of the claim are met by the references. Claim 15's limitations difference is taught in *Kephart et al*:

- reflecting the information such as the learning result, characteristic, state of feeling and the degree of growth/intelligence on the activity of the cyber character which represents the toy in the cyber community (page 1, [0008], "One attempt to ... facilitates that action")

- reflecting the experience information by the activity of the cyber character on the activity of the toy (page 1, [0009], lines 2-5, "as noted by ... more established ones")

Danieli et al:

- transmitting information to the toy (column 1, lines 39-42, "The physical character moves ... the physical character")

Regarding claim 16:

The rejection of claim 16 is similar to that for claim 15 as recited above since the stated limitations of the claim are met by the references. Claim 16's limitations difference is taught in *Gagin et al*:

- updating the operating/application program corresponding to the extent of learning of the toy (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of *Freeman et al* and in further view of *Zutavern et al* "Optically-activated GaAs switches for compact accelerators and short pulse sensors" (25-27 June 1996).

Regarding claim 10:

Danieli et al teaches,

- a cyber character (Abstract, "An educational computer ... program will continue") for learning (column 1, lines 48-53, "the programmed dialog ... will be unavailable") online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")
- a toy (Fig. 1)
- an input apparatus for inputting an image, audio information and letters (column 7, lines 30-35, "A user may ... camera, or the like")
- a communication apparatus for wire (column 5, lines 8-10, "substitutions to the ... copper wires, infrared signals, etc.") and wireless (column 4, lines 64-67, "Exemplary embodiments of ... microprocessor-based computer system") communication

However, *Danieli et al* doesn't explicitly teach a cyber community having a cyber character which grows by learning in online, a toy which grows by receiving experience of the cyber character or experience of a user's learning or a sensor for sensing an outside pulsation while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")

Yamaguchi et al teaches,

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- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")
- receiving experience of a user's learning (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")
- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Zutavern et al teaches,

- a sensor for sensing an outside pulsation (page 31, Introduction section, left column, paragraph 1, "This paper describes ... in 1 ns wide pulses")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")
- Imaging through scattering media (*Zutavern et al*, page 34, High Speed Sensor Applications section, left column, paragraph 1, "PCSS can be ... precision range sensing")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al* and *Zutavern et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner and imaging through scattering media.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of *Freeman et al* and in further view of *Jigour et al* USPN 5877975 "Insertable/removable digital memory apparatus and methods of operation thereof" (March 2, 1999).

Regarding claim 17:

Danieli et al teaches,

- having the toy (Fig. 1) study by controlling a certain part of the toy or a remote controller (Abstract, "An education computer ... program will continue") or using an information input means such as an audio information (column 7, lines 30-35, "A user may ... camera, or the like") and then storing information in the memory (column 7, lines 8-13, "The personal computer ... other optical medium")
- reflecting information of the toy on the activity of the cyber character (Abstract, "An educational computer ... program will continue") by transmitting (column 1, lines 39-42, "The physical character ... the physical character") the information to the server (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2");

However, *Danieli et al* doesn't explicitly teach having the toy study by controlling a certain part of the toy or a remote controller or using an information input means such as an audio information and then storing the experience information in the memory, reflecting the experience information of the toy on the activity of the cyber character in the cyber community according to the experience information of the toy by transmitting the experience information to the network server, having the toy learn by transmitting the experience information according to the activity of the cyber character in the cyber

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community, upgrading the operating/application program corresponding to the extent of learning of the toy or the memory of the toy has a number of memories in a toy and accordingly, the memories have the toy grow to have different experiences respectively by replacing the respective memories while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community") performed in a network server (Abstract, "A complete multi-user game ... game playing equipment")

- upgrading the operating/application program (column 4, lines 14-25, "The subscribers' equipment ... the server site")

Yamaguchi et al teaches,

- learning (column 13, lines 12-30, "Steps 2 to 6 are repeated ... network for operation")
- experience information (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- growing in experience proportional to learning (page 2, [0009 continued], lines 6-8, "As the agent grows in experience so does the amount of time required for the learning step")

Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67,

"The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")

- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Jigour et al teaches,

- the memory of the toy has a number of memories (Figs. 20-21) in a toy (column 3, lines 29-38, "MCCs are expected ... a PDA adapter") and accordingly, the memories have the toy grow by replacing the respective memories (column 15, lines 34-36, "sufficient data storage ... a later date")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by ... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")

- Providing significant additional data storage at a lower initial cost (*Jigour et al*, column 15, lines 26-34, "The digital media ... memory is acquired")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al* and *Jigour et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner and providing significant additional data storage at a lower initial cost.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Danieli et al* in view of *Gagin et al* in view of *Yamaguchi et al* in view of *Kephart et al* in view of *Freeman et al* in view of *Hill* USPN 4802078 "Active snubbing circuit for switching mode power supply" (January 31, 1989) and in further view of *Brellis et al* USPN 6544040 B1 "Method, apparatus and article for presenting a narrative, including user selectable levels of detail" (Patented April 8, 2003; Filed June 27, 2000).

Regarding claim 18:

Danieli et al teaches,

- turning on the toy (Fig. 1; column 1, lines 58-60, "the computer prompts ... turn it on")

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- reflecting information of the toy on the cyber character (Abstract, "An educational computer ... program will continue") in online (column 7, lines 46-53, "The personal computer ... been illustrated in FIG. 2")

However, *Danieli et al* doesn't explicitly teach turning on the power supply of the toy, selecting a user questioning the mode of the user by the toy, selecting a default user in case the user mode is not selected, reflecting the experience information of the toy on the cyber character in online according to the selected user and accordingly, changing the activity of the cyber community or reflecting the experience of the cyber character in the cyber community in online on the current status of the toy and changing the action of the toy while *Gagin et al* teaches,

- a cyber community (column 6, lines 13-24, "The database server ... the cyber community")

Yamaguchi et al teaches,

- experience information (column 8, lines 53-65, "After completion of ... feeling of comfort")

Kephart et al teaches,

- reflecting the experience information of the toy on the cyber character in online and accordingly, changing the activity of the cyber community (page 1, [0008], "One attempt to ... facilitates that action")

- reflecting the experience of the cyber character in the cyber community in online on the current status of the toy and changing the action of the toy (page 1, [0008], "One attempt to ... facilitates that action")

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Freeman et al teaches,

- a community (column 8, lines 59-67, "Through a WEB based ... work of fellow learners") which grows (Fig. 4, item 414; Abstract, "A collaborative learning system ... forced to acquire additional skills") by learning online (Figs. 2-3; column 5, lines 64-67, "The teaching process 300 ... a Chief Executive Officer"; column 6, lines 1-10, "of a well known corporation ... experiences incorporate diverse scenarios")
- receiving experience of a user's learning (column 8, lines 59-67, "Through a WEB based ... work of fellow learners")

Hill teaches,

- turning on a power supply (column 2, lines 36-43, "A control circuit ... simple circuit design")

Brelis et al teaches,

- selecting a user questioning the mode of the user by the toy (Fig. 8; column 7, lines 19-32, "The character selection ... presentation operating modes". Note: The toy operates with the game so the game is considered part of the toy when it prompts the user for a mode.)
- selecting a default user in case the user mode is not selected (column 9, lines 8-11, "The CPU 18 executes an ... presentation operating modes". Note: A default presentation operating mode can also include a default character.)

Motivation - The portions of the claimed toy would have been a highly desirable feature in this art for

- Providing game playing services over existing networks which are inherently noisy and unreliable (*Gagin et al*, column 2, lines 14-39, "The present invention ... operates in spite of lost data")
- Obtaining control characteristics suitable to the user (*Yamaguchi et al*, Abstract, "An evolutionary control ... the user's preference")
- Allowing a newly instantiated agent to learn from more established ones (*Kephart et al*, page 1, [0009], lines 2-5, "as noted by.... more established ones")
- Accomplishing the learning goal in a way most productive to the learner (*Freeman et al*, column 6, lines 10-32, "Viewing video streams or ... to that particular learner")
- Improving efficiency (*Hill*, column 2, lines 16-19, "It is yet ... lower power levels")
- Controlling the direction the story takes (*Brelis et al*, column 1, lines 28-40, "These interactive presentations ... different narrative each time")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Danieli et al* as taught by *Gagin et al*, *Yamaguchi et al*, *Kephart et al*, *Freeman et al*, *Hill* and *Brelis et al* for the purpose of providing game playing services over existing networks which are inherently noisy and unreliable as well as obtaining control characteristics suitable to the user, allowing a newly instantiated agent to learn from more established ones, accomplishing the learning goal in a way most productive to the learner, improving efficiency and controlling the direction the story takes.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- *Sterling*; US 6466975; Systems and methods for virtual population mutual relationship management using electronic computer driven networks
- *Danieli et al*; US 5977951; System and method for substituting an animated character when a remote control physical character is unavailable
- *Wu*; US 6275575; Method and system for coordinating and initiating cross-platform telephone conferences
- *Gagin et al*; US 5630757; Real-time multi-user game communication system using existing cable television infrastructure
- *Yamaguchi et al*; US 6314412; Evolutionary control of machine based on user's preference inferred from user's operation
- *KEPHART et al*; US 20010042087; AN AUTOMATED ASSISTANT FOR ORGANIZING ELECTRONIC DOCUMENTS
- *Baer*; US 4846693; Video based instructional and entertainment system using animated figure
- *Berman*; US 4373918; Audio-visual, child-participating educational entertainment center
- *Murphy*; US 6564380; System and method for sending live video on the internet
- *Jigour et al*; US 5877975; Insertable/removable digital memory apparatus and methods of operation thereof

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- *Hill*; US 4802078; Active snubbing circuit for switching mode power supply
- *Brelis et al*; US 6544040; Method, apparatus and article for presenting a narrative, including user selectable levels of detail
- *Dan et al*; US 20020022507; Toy driving system and method using game program
- *Freeman et al*; US 6,301,462; "Online collaborative apprenticeship"
- *Anderson et al*; A continuous media I/O server and its synchronization mechanism; Computer; Vol. 24, Iss. 10; Oct. 1991; pp 51-57
- *Zutavern et al*; Optically-activated GaAs switches for compact accelerators and short pulse sensors; Twenty-Second International Power Modulator Symposium; 25-27 June 1996; pp 31-34
- *Maes*; Agents that reduce work and information overload; Communications of the ACM; Vol. 37, Iss. 7; July 1994
- *Henning*; SPEC CPU2000: measuring CPU performance in the New Millennium; Computer; Vol. 33, Iss. 7; July 2000; pp 28-35
- *Shum et al*; Virtual reality modeling from a sequence of range images; Proceedings of the IEEE/RSJ/GI International Conference on Intelligent Robots and Systems 'Advanced Robotic Systems and the Real World'; Vol. 1; 12-16 Sept. 1994; pp 703-710
- *Asada et al*; Robotics in edutainment; Proceedings IEEE International Conference on Robotics and Automation; Vol. 1; 24-28 April 2000; pp 795-800
- *Schmidt et al*; Choreographing realistic animated birds using gesture recognition; Proceedings IEEE Virtual Reality Annual International Symposium; 14-18 March 1998; pp 211

- *Büsher et al*; Supporting cooperation across shared virtual environments; Proceedings of the international ACM SIGGROUP conference on Supporting group work; November 1999
- *Cohen et al*; Context-sensitive learning methods for text categorization; ACM Transactions on Information Systems (TOIS); Vol. 17, Iss. 2; April 1999
- *Langley et al*; Applications of machine learning and rule induction; Communications of the ACM; Vol. 38, Iss. 11; November 1995
- *SILER*; US 20020061505; Cognitive functioning facilitating method for R and D applications, involves analyzing model with connections between functions, for discovering additional information, which is used to invent information for improving function
- *Miyashita et al*; US 6057856; 3D virtual reality multi-user interaction with superimposed positional information display for each user
- *Ashida et al*; US 5819246; Non-linear model automatic generating method
- *Tal et al*; US 6491516; Active Hanukkah candelabrum
- *KOBAYASHI et al*; US 20030157983; PORTABLE TOY, PORTABLE INFORMATION TERMINAL, ENTERTAINMENT SYSTEM, AND RECORDING MEDIUM
- *Tachikawa*; US 6160371; Robot system, control method, and recording medium
- *Hartzell et al*; US 5294229; Teacher and parent interactive communication system incorporating pocket sized portable audio numeric terminals
- *Brown*; US 5913310; Method for diagnosis and treatment of psychological and emotional disorders using a microprocessor-based video game

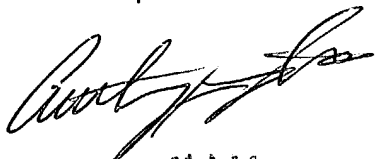
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- *Spector*; US 6227863; Phonics training computer system for teaching spelling and reading
- *Darago et al*; US 6170014; Computer architecture for managing courseware in a shared use operating environment
- *Nagamitsu et al*; US 5590062; Simulator for producing various living environments mainly for visual perception
- *Bachhuber*; US 5623257; Method and apparatus for supplying power to the receiver of a motor vehicle locking system
- *Dornbush et al*; US 6471521 B1; System for implementing collaborative training and online learning over a computer network and related techniques
- *Stuckman et al*; US 6273815; Virtual electronic pet and method for use therewith
- *Wen*; US 5562453; Adaptive biofeedback speech tutor toy

Any inquiry concerning this communication or earlier communications from the Office should be directed to Meltin Bell whose telephone number is 571-272-3680. This Examiner can normally be reached on Mon - Fri 7:30 am - 4:30 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anthony Knight, can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.



Anthony Knight
Supervisory Patent Examiner
Group 3600

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